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# DESCRIPTION OF INVENTION

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**A.I.Seppo**

(72) Author of invention  
(71) Applicant

## **(54) ENDO-ORTHOPEDIC DEVICE FOR HIP JOINT RECONSTRUCTION**

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The present invention refers to Orthopedics and Traumatology.

There is a known orthopedic endo-device for reconstruction of the hip joint, which contains threaded rods with a working cutting edge and shaped rods with a hollow conical head.

However, this device is intended for long term firm immobilization of fragments of a broken tubular bone.

The purpose of the present invention is to ensure a permanent gap between articular surfaces of a joint, which has been reduced after dislocation, deteriorated due to a pathological process or created by surgery, in rotation, flexion/extension and abduction/adduction for children.

To achieve this, the present endoprosthetic device is composed of two length-adjustable sleeves, which are connected by a spherical head and an arch-shaped guide-channel with edges of a different height. Free edges of the sleeves contain dentated conical apertures for shaped rod heads, which carry threaded rods.

Figure 1 shows the present orthopedic endoprosthetic device for reconstruction of the

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hip joint, front view; figure 2 shows the same in a lateral view.

The device contains threaded rods 1 and 2 with working cutting parts 3 and 4, shaped rods 5 and 6 with hollow conical heads 7 and 8 and is composed of length-adjusted sleeves 9 and 10. The sleeves are connected by a movable joint composed of the spherical head 11 and arch-shaped guide-channel 12 with edges of different height 13. Free ends of the sleeves have dentated conical apertures 14 for shaped rod heads, which carry threaded rods 1 and 2.

Sleeve 9 is used to attach the device to the hip bone and ensures the necessary strength at the bone-metal interface, while sleeve 10 is used to attach the device to the tubular femur. By rotating the half-shaft 15 the surgeon can set the necessary gap between articular surfaces for the growth period.

### *Subject of Invention*

Endoprosthetic orthopedic device for reconstruction of the hip joint, containing threaded rods with hollow conical heads, which is distinguished by being composed of two length-adjusted sleeves, connected with a movable joint made of a conical hollow head

and an arch-shaped guide-channel with edges of different height, with dentated conical apertures in free ends of the sleeves for heads of shaped rods carrying the threaded rods, in order to achieve a permanent gap between articular

surfaces of joints reduced after dislocation, deteriorated due to a pathological process or created by surgery, in rotation, flexion/extension and abduction/adduction with children.

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